



1074 Kenran Industrial Dr.
St. Louis, MO 63137
Phone: 1-800-381-9968

HUMCO ENGINE ROOM

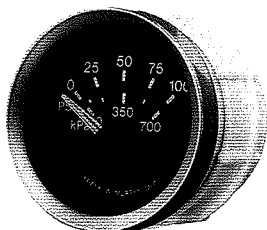
Murphy Electric Gage Instruments

Electric Gage Instruments



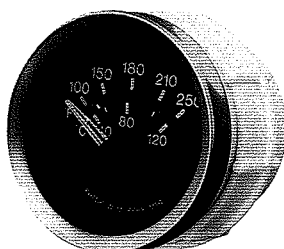
Our EG21 Series electric gages include shock resistance air core movement, polyester (PBT) case, polycarbonate lens, and stainless steel bezel. The gages are environmentally sealed to exclude moisture and other corrosive elements.

The EGS21 Series electric SWICHGAGE®s have the same features as the EG21 Series, plus adjustable set-point PowerHall* switch output for operating alarms or equipment shutdown. Both Series fit in standard 2-1/16 in (52 mm.) openings.
Patents 5121109, 4975687, 5608386



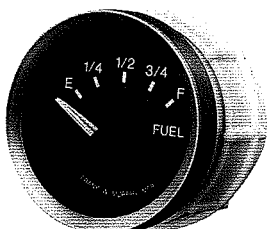
PRESSURE

EG21P MURPHYGAGE®; EGS21P SWICHGAGE®
Scales through 400 psi (2.76 MPa) [27.6 bar]. Various units of measurement available.



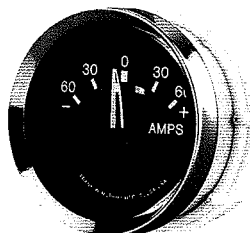
TEMPERATURE

EG21T MURPHYGAGE®; EGS21T SWICHGAGE®
Dual scale dials in degrees Fahrenheit and Celsius. Suitable for engine coolant or oil temperature. Ranges available for 100 to 250°F (38 to 120°C) or 140 to 300°F (60 to 150°C).



FUEL LEVEL

EG21F MURPHYGAGE®; EGS21F SWICHGAGE®
Accurate level indication. Monitors tank level from full to empty.

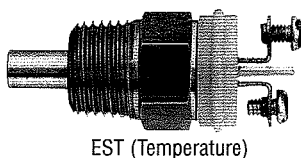
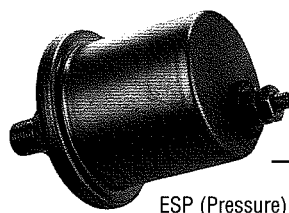
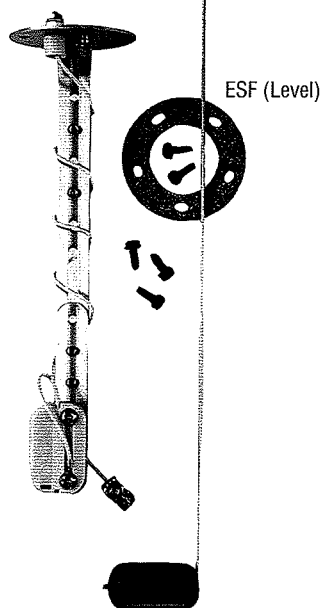


AMMETER

EG21AM MURPHYGAGE®; EGS21AM SWICHGAGE®
Easy-to-read with center zero. For ±60 amperes or ±100 amperes (internal shunt).

VOLTMETER (not shown)

EG21VM MURPHYGAGE®; EGS21VM SWICHGAGE®
Easy-to-read dial. Models available for 12 or 24 Volt systems.



ELECTRIC GAGE sendERS

ESP (Pressure), EST (Temperature), ESF (Level)
Available in 1-wire and 2-wire models.

- For pressures up to 400 psi (2.76 kPa) [27.6 bar].
- For temperatures of 130-250°/140-300°F (54-121°/60-149°C).
- For fuel tanks only, depths: 6-24 in. (152-610 mm.).



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Murphy Accessories and Components

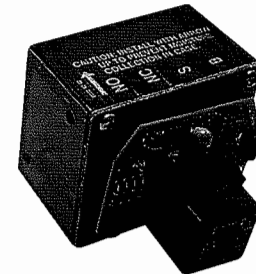
Accessories and Components



TIME DELAY / ALARM BEFORE SHUTDOWN

760AF CONTROL RELAY

Select 15, 30, or 60 second Time delay before shutdown.
Available for 12 or 24 VDC, positive or negative ground.



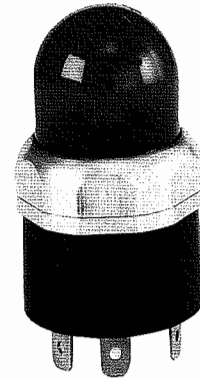
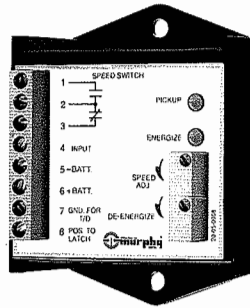
SAH MINI-SIREN® AUDIBLE ALARM

Attention getting audible alarm.

HIGH VISIBILITY FLASHING VISUAL ALARM

TL7 SELECTRONIC® ALARM

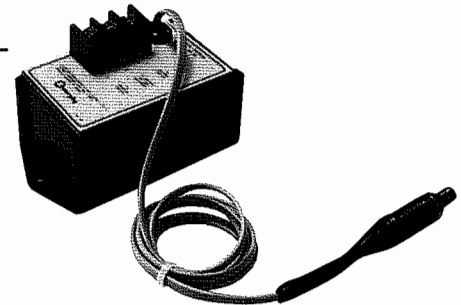
Designed by Murphy for use with SWICHGAGE® instruments.
Select 12 or 24 VDC, positive or negative ground.



SINGLE SET POINT SPEED SWITCH

SS300 SPEED SWITCH

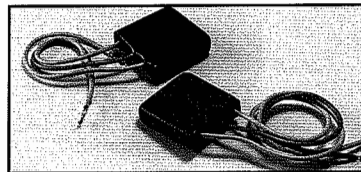
Senses engine overspeed. SPDT relay operates alarm or initiates engine shutdown. Also use to engage and disengage 4-Wheel drive solenoids.



TURBO COOLDOWN CONTROL

TD781 CONTROL RELAY

Designed for turbo or unattended five minute cooldown before shutdown, driver initiated. Model TD780 available for excessive idle shutdown.

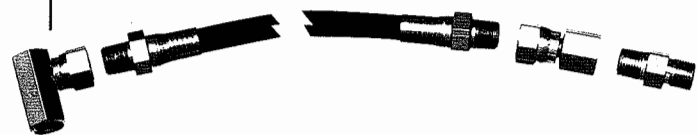


ALARM ONLY DIODE 65010098

Isolates a SWICHGAGE® from the shutdown circuit to provide alarm only.

OIL PRESSURE LINE (Deluxe Tubing Kit)

The premium hose can be ordered to exact length; it has 1/8 NPT swaged fittings. Optional adapters are available, call Humco for details.



DESIGNER BEZELS (All bezels Stainless steel)

Special styles are available for selected SWICHGAGE® instruments. The standard is Low Profile stainless steel; High Profile and Black, Non-glare finished optional.



TEMPERATURE ADAPTERS (not shown)

American, British, Metric
Adapter bushings available for all engine makers/models.

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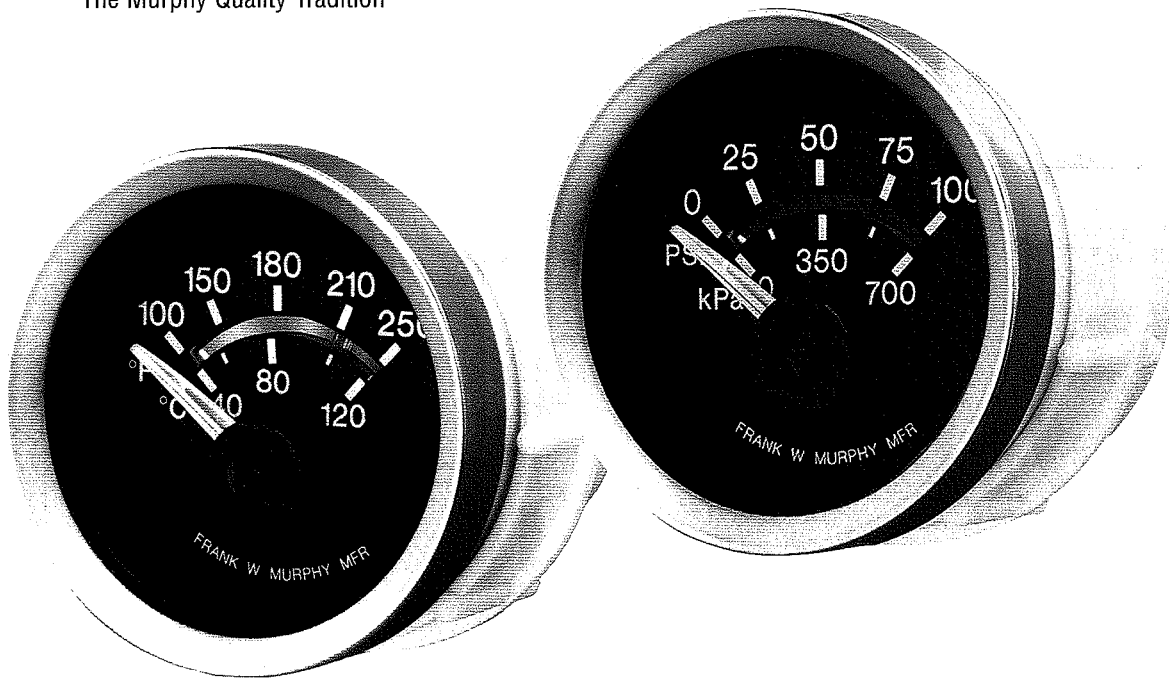
HUMCO ENGINE ROOM

Murphy EG SERIES Electric Gage and Swichgage®



EG SERIES Electric Gage and Swichgage®

Leading Edge SELECTRONIC® Technology In
 The Murphy Quality Tradition



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*Pressure Temperature Fuel Level Amps Volts Volts
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Leading edge SELECTRONIC® technology

The EG21 Series Electric Gage and the EGS21 Series SWICHGAGE® take the electric gage to new heights with proven state of the art technology and reliability. Utilizing our proven EG Air Core movement design, the EG21 Series offers technological improvements in overall operation, lighting, accuracy in reading, wiring and installation. The EG21 Series give you assurance of highest reliability and service.

These rugged gages are environmentally sealed and exceed the rigid SAE J1810 standard for reliable operation under tough off-road and power unit environments. Corrosion-resistant materials are used throughout, making the EG21 highly desirable for marine and other environmentally sensitive applications. Soft, non-glare dial and pointer illumination is provided by a "cold light" LED and when

powered the white lettering and clear pointer become soft red. Mirror band eliminates parallax reading error when the pointer and its reflection are aligned.

Electric SWICHGAGE®

The EGS21 Series SWICHGAGE® has all of the features of the EG21 Series Gage plus an adjustable set point PowerHall® Effect switch output for operating alarms or equipment shutdown. The trip point is adjustable over 90% of the scale and has a set point indicator visible from the gage face. Now you can have both, the ease of electric gage installation and the reliable switching of Murphy's famous SWICHGAGE®.



Specifications

Power Input: For Gage, SWICHGAGE® and Sender: 12 VDC;
24 or 32 VDC when specified (see below for 32 VDC limitations).

NOTE: EG21 Series gage and EGS21 Series SWICHGAGE® MOVEMENT and ILLUMINATION require 12 VDC to function. For 24 or 32 volt systems, voltage converters are built into the electrical wire/connector assembly and supplied with instrument. Specify voltage when ordering.



Ranges:

Pressure:	80	(552 kPa)	[5.52 bar]
	100	(689 kPa)	[6.89 bar]
	200	(1.38 MPa)	[13.80 bar]
	300	(2.07 MPa)	[20.70 bar]
	400	(2.76 MPa)	[27.60 bar]
Temperature:	250°F	(121°C)	
	300°F	(149°C)	
Fuel Level:	Empty — 1/4 — 1/2 — 3/4 — Full		
Ammeter:	60 — 0 — 60 amps (internal shunt)*		
	100 — 0 — 100 amps (internal shunt)*		
Voltmeter:	12 VDC: 8 — 18 Volts *		
	24 VDC: 16 — 36 Volts *		

* EGS21AM Ammeter SWICHGAGE®, EG21VM Voltmeter gage and EGS21VM Voltmeter SWICHGAGE® are for 12 VDC and 24 VDC ONLY.

Case: Polyester (PBT), impact and weather resistant; with convenient screw-on mounting clamp.

Bezel: Polished 316 stainless steel bezel is supplied as standard; Available in black. SAE style optional.

Lens: Clear Polycarbonate and UV stabilized.

Air Core Movement: Silicon dampened pointer.

Dial: Black background and white markings; behind dial lighting (white marking becomes red when illuminated); dual scale with mirror band to reduce parallax reading errors.

SWICHGAGE® Sensor: PowerHall® Effect; outputs ground signal (sinking output) rated: 300 mA continuous (EGS21 Series only). Pressure, Fuel, Volts set on decreasing scale. Temperature and Amps set on increasing scale. Output saturation voltage (voltage drop across switch): 1.3-2.3 Volts @ 25°C (May require some conditioning to work with logic inputs)

SWICHGAGE® Set Point Indicator: Visible on mirror band (scale); adjustable from the back of the unit (1/16 in. hex type wrench).

Wiring: Plug connector with wire leads, 18 AWG (1.0 mm²) x 8 in. (203 mm.) length.

Operating Temperature: -40 to 185°F (-40 to +85°C).

Storage Temperature: -77 to 185°F (-60 to 85°C).

Over Voltage (Gage Movement): Withstands a voltage of 200% of nominal system voltage for 5 minutes. (Meets SAE J1810 standards).

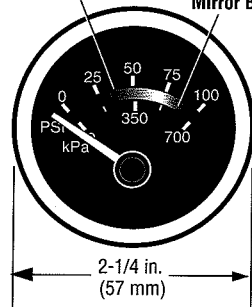
Reversed Polarity (Gage Movement): Withstands reversed battery terminal polarity indefinitely within operating temperatures.

Environment and Test: Meets SAE J1810 standards.

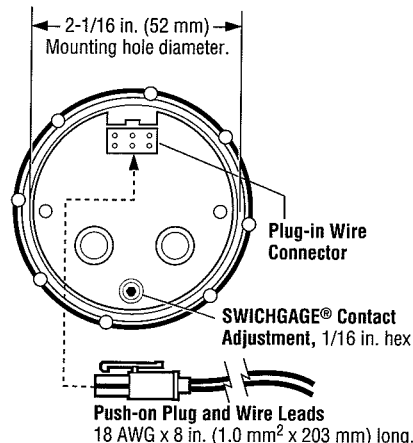
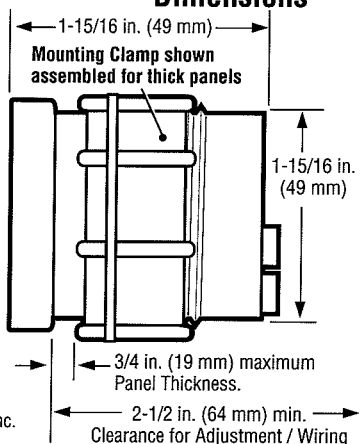
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Dimensions

SWICHGAGE® Adjustable Contact Indicator
Reflective Mirror Band



PowerHall® is a registered trademark of Allegro MicroSystems, Inc.





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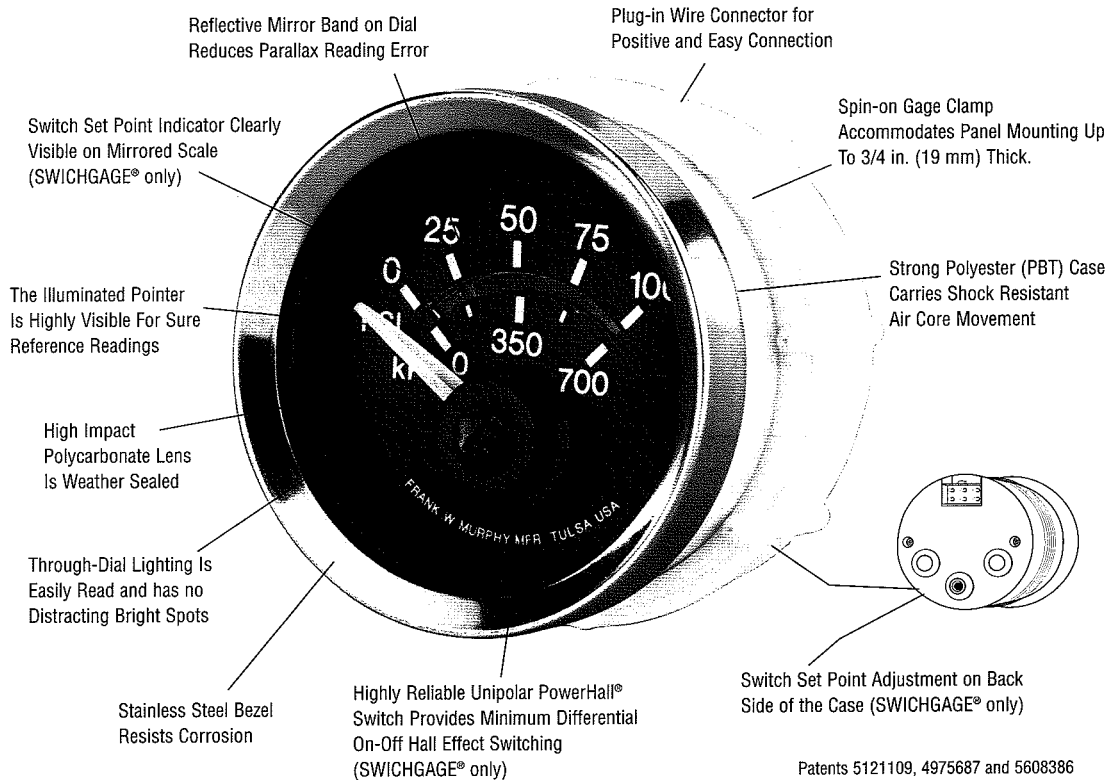
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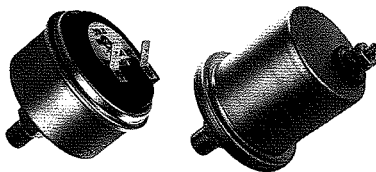
NOTE: The features below apply to both the EG21 Series Gage and EGS21 Series SWICHGAGE® unless indicated.



Patents 5121109, 4975687 and 5608386

Senders

Pressure

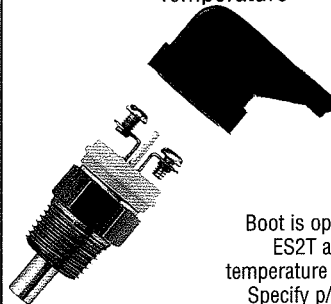


ESP

- ESP: 1-wire-to-ground sender †
- ES2P: 2-wire ungrounded sender †
- ESDP: 2-wire ungrounded sender, drives 2 gages †
- ESPM: 1-wire-to-ground sender †† **
- ES2PM: 2-wire ungrounded sender †† **

† Thru 100 psi (689 kPa) [6.89 bar].
†† Ranges above 100 psi (689 kPa) [6.89 bar].
Mounting off-equipment recommended.

Temperature



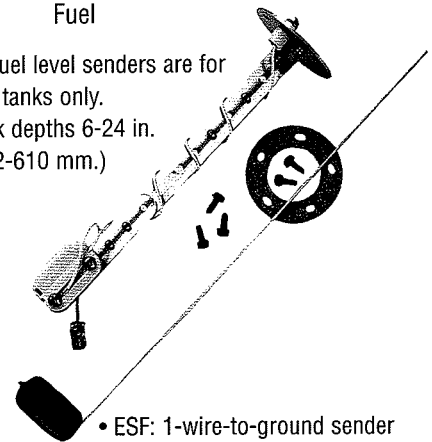
ES2T

Boot is optional on ES2T and ESDT temperature senders. Specify p/n 00-00-3624

- EST: 1-wire-to-ground sender
- ES2T: 2-wire ungrounded sender
- ESDT: 2-wire ungrounded sender, drives 2 gages

Fuel

All fuel level senders are for fuel tanks only. Tank depths 6-24 in. (152-610 mm.)



- ESF: 1-wire-to-ground sender
- ES2F: 2-wire ungrounded sender
- ESDF: 2-wire ungrounded sender, drives 2 gages



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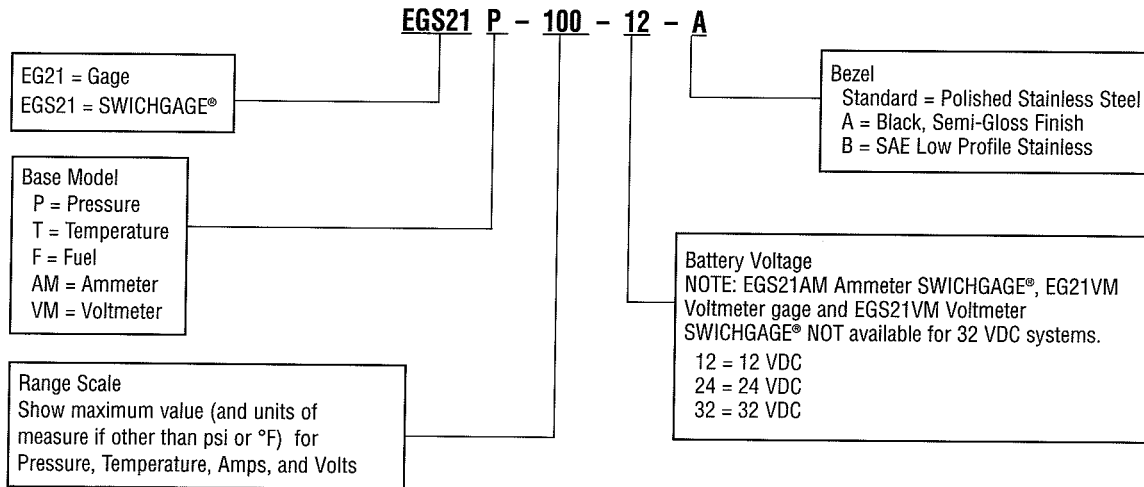
Murphy EG SERIES Electric Gage and Swichgage®

How to order

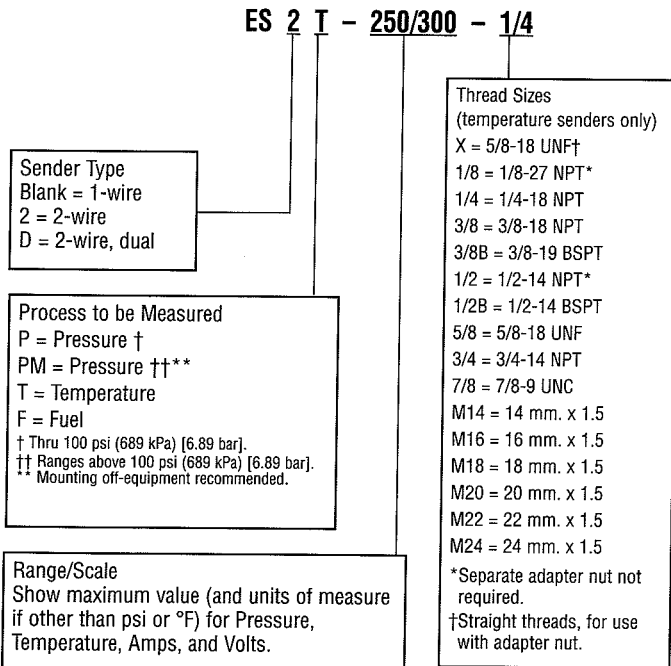
EG Series Gage and SWICHGAGE®



NOTE: EG21 and EGS21 Series are designed for use with 12 volt systems. For 24 or 32 volt systems, voltage reducing resistors are included in the wire/connector assembly. No designator required for Standard configurations.



EG Series Senders



Accessories and Replacement Parts

Off-Equipment Mounting Kit
This kit allows off-equipment mounting of the ESPM, ES2PM and ESDPM pressure senders. Recommended for protection from damaging vibration. Customer supplies hose and fittings. Specify part number 30-00-0213 when ordering.

Wire/Connector Assembly
Listed below are replacement part numbers for all wire/connector assemblies. Voltage converter included for 24 and 32 volt. Specify part number when ordering.

	12 VDC	24 VDC	32 VDC
EG21P / T / F	05004506	05006166 (05004546)*	05006167 (05004547)*
EGS21P / T / F	05004507	05006168 (05004548)*	05006169 (05004549)*
EG21AM	05004505	05006170 (05004550)*	05006171 (05004551)*
EGS21AM	05004504	05006172 (05004552)*	—
EG21VM	05004508	05004508	—
EGS21VM	05004504	05004504	—

*For gages with date code R1 (January 1996) or earlier (Q12, Q11, etc.) specify part number shown in parenthesis.

Warranty

A two year warranty on materials and workmanship is given with these products. Details are available on request and are packed with each unit.

CAUTION: Certain dangers to human safety and to equipment may occur if some equipment is stopped without pre-warning. It is recommended that monitored functions be limited to alarm-only or to alarm before shutdown.